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US 6470429 B1 US 6397293 B2
US 6185652 B1 US 6094699 A
US 5812754 A

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(54) Abstract Title: **Modular architecture for a network storage controller**

(57) A network storage controller for transferring data between a host computer and a storage device, such as a redundant array of inexpensive disks (RAID), is disclosed. The network storage controller includes at least one channel interface module which is connected to a passive backplane, and selectively transfers data between the host computer and storage device and the passive backplane. The network storage controller also includes at least one controller memory module (104, 108), which communicates with the channel interface module (136, 140) via passive backplane (116), and processes and temporarily stores data received from the host computer or storage device. In applications where redundancy is required, at least two controller memory modules and two channel interface modules are used. The controller memory modules may mirror data between one another using the passive backplane and a shared communication path on the channel interface modules, thereby substantially avoiding the use of host or disk channels to mirror data.

